



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,648	05/01/2006	Akio Yamashita	0756-7690	1732
31780	7590	02/19/2009	EXAMINER	
ERIC ROBINSON			SANEI, HANA ASMAT	
PMB 955			ART UNIT	
21010 SOUTHBANK ST.			PAPER NUMBER	
POTOMAC FALLS, VA 20165			2889	
			MAIL DATE	DELIVERY MODE
			02/19/2009	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/577,648

**Applicant(s)**

YAMASHITA ET AL.

**Examiner**

HANA A. SANEI

**Art Unit**

2889

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 May 2006.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☒ Claim(s) 4-6, 10-17 and 19-32 is/are allowed.  
6) ☒ Claim(s) 1-3, 7-9 and 18 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 01 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/SB08)  
Paper No(s)/Mail Date 5/1/06  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claim(s) 1-3, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Utsunomiya (U.S. Pat. No. 6814832 B2) in view of Yamazaki (U.S. Pub. No. 2001/0040645 A1).

Regarding Claim 1, Utsunomiya teaches a first step of sequentially forming a first metal film (36, "wiring film," formed of "aluminum," Col. 9, lines 1-10, see at least Figs. 1A – 1E), a first oxide film (2, "peeling layer," formed of SiO<sub>2</sub>, Col. 5, lines 59-62), and an optical filter (3, "combined with them, filters, reflecting filters," Col. 8, lines 7-18) on a first substrate (1, "element-forming substrate," formed of "glass quartz," Col. 4, lines 45-47 & Col. 5, lines 7-8), attaching a first support medium (5, "temporary transfer substrate," Col. 9, lines 50-51) to a surface of the optical filter (3) with a first peelable adhesive agent (4, "adhesive film,") such that the first support medium (5) faces the first substrate (1) through the optical filter (3), and removing the first peelable adhesive

agent (4, "bonding layer 4 is dissolved to peel the temporary transfer substrate 5," abstract) and the first support medium (5), and separating the first metal film (36) from the first oxide film (2) by a physical means (Fig. 1C). Utsunomiya fails to teach a second step of forming a layer including a pixel over a surface of a second substrate.

In the same field of endeavor, Yam teaches a second step of forming a layer (556, "an EL layer," [0114]) including a pixel (554, "pixel electrode," [0113]) over a surface of a second substrate (553, "a second interlayer insulating film," [0111]), and attaching a third substrate (602, "fixing substrate," [0127]) to a surface of the layer (556) including the pixel (554) with a first adhesive material (603, "a first adhesive layer," [0127]); and a third step of attaching the first oxide film (707, "protective film," formed of "silicon oxide film" [0142], [0081]) to another surface of the second substrate (553) with a second adhesive material (608, "a second adhesive layer," [0134]) after the first and second steps in order to provide a method of manufacturing that indirectly reduces the number of manufacturing steps, thereby improving cost efficiency.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to add the second substrate, as disclosed by Yamazaki, in the method of manufacturing of Utsunomiya in order to provide a method of manufacturing that indirectly reduces the number of manufacturing steps, thereby improving cost efficiency.

Regarding Claim 2, Utsunomiya-Yamazaki teaches that the first substrate (1, "element-forming substrate," formed of "glass quartz," Col. 4, lines 45-47 & Col. 5, lines 7-8 of Utsunomiya) and the second substrate (553, "a second interlayer insulating film,"

formed of organic resin [0111] of Yamazaki) are any of a quartz substrate, a ceramic substrate, a silicon substrate, a metal substrate, and a stainless substrate, while the third substrate (602, "fixing substrate," is a "plastic substrate," [0127] of Yamazaki) is plastic, a polarizing plate, or a polarizing plate having a retardation plate.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to add the second substrate, as disclosed by Yamazaki, in the method of manufacturing of Utsunomiya in order to provide a method of manufacturing that indirectly reduces the number of manufacturing steps, thereby improving cost efficiency, while providing compositions that are flexible and heat-resistant.

Regarding Claim 3, Utsunomiya teaches that after the third step, a surface of the optical filter (3, "combined with them, filters, reflecting filters," Col. 8, lines 7-18) is attached with plastic, a polarizing plate, or a polarizing plate having a retardation plate (6, "resin substrate," Col. 11, lines 51-52).

Regarding Claim 18, Utsunomiya-Yamazaki teaches a first pixel electrode (554, "pixel electrode," [0113] of Yamazaki) is formed on a surface of the third substrate (602, "fixing substrate," [0127]).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to add the second substrate, as disclosed by Yamazaki, in the method of manufacturing of Utsunomiya in order to provide a method of manufacturing that indirectly reduces the number of manufacturing steps, thereby improving cost efficiency.

***Allowable Subject Matter***

A. Claim(s) 4 are allowed over the prior art of record.

The following is an examiner's statement of reasons for allowance:

The prior art of record (most comprehensive prior art of record to Utsunomiya of U.S. Pat. No. 6814832) teaches a method of manufacturing a display device, comprising: a first step of sequentially forming a first metal film, a first oxide film, and an optical filter on a first substrate, attaching a second substrate to a surface of the optical filter with a first adhesive material such that the second substrate faces the first substrate through the optical filter, attaching a first support medium to a surface of the second substrate with a first peelable adhesive agent, and separating the first metal film from the first oxide film by a physical means; a second step of forming a layer including a pixel over a surface of a third substrate; and a third step of attaching the first oxide film to another surface of the third substrate with a third adhesive material after the first and second steps, and removing the first peelable adhesive agent and the first support medium.

However, the prior art of record neither anticipates nor renders obvious to one ordinary skilled in the art the method of manufacturing a display device comprising the various elements as claimed above in combination with the specific limitation of attaching a fourth substrate to a surface of the layer including the pixel with a second adhesive material as set forth in Claim 4.

B. Claim(s) 5-6, 17 are allowed over the prior art of record.

The following is an examiner's statement of reasons for allowance:

The prior art of record (most comprehensive prior art of record to Utsunomiya of U.S. Pat. No. 6814832) teaches a method of manufacturing a display device, comprising: a first step of sequentially forming a first metal film, a first oxide film, and an optical filter on a first substrate, attaching a first support medium to a surface of the optical filter with a first peelable adhesive agent such that the first support medium faces the first substrate through the optical filter, separating the first metal film from the first oxide film by a physical means, and attaching a second substrate to a surface of the first oxide film with a first adhesive material and removing the first peelable adhesive agent and the first support medium so as to form an optical film; a second step of forming a layer including a pixel on a surface of a third substrate; and a third step of attaching the optical filter to another surface of the third substrate with a third adhesive material after the first and second steps.

However, the prior art of record neither anticipates nor renders obvious to one ordinary skilled in the art the method of manufacturing a display device comprising the various elements as claimed above in combination with the specific limitation of attaching a fourth substrate to a surface of the layer including the pixel with a second adhesive material as set forth in Claim 5.

Claim(s) 6, 17 are allowed because of their dependency status from Claim 5.

C. Claim(s) 7-9 are allowed over the prior art of record.

The following is an examiner's statement of reasons for allowance:

The prior art of record (most comprehensive prior art of record to Utsunomiya of U.S. Pat. No. 6814832) teaches a method of manufacturing a display device,

comprising: a first step of sequentially forming a first metal film, a first oxide film, and an optical filter on a first substrate, attaching a first support medium to a surface of the optical filter with a first peelable adhesive agent such that the first support medium faces the first substrate through the optical filter, and separating the first metal film from the first oxide film by a physical means.

However, the prior art of record neither anticipates nor renders obvious to one ordinary skilled in the art the method of manufacturing a display device comprising the various elements as claimed above in combination with the specific limitation of a second step of sequentially laminating a second metal film and a second oxide film on a second substrate, forming a layer including a pixel over the second oxide film, and attaching a third substrate to a surface of the layer including the pixel with a first adhesive material; and a third step of separating the second metal film from the second oxide film by a physical means after the first and second steps, and attaching the first oxide film to the second oxide film with a second adhesive material s set forth in Claim 7.

Claim(s) 8-9 are allowed because of their dependency status from Claim 7.

D. Claim(s) 10 are allowed over the prior art of record.

The following is an examiner's statement of reasons for allowance:

The prior art of record (most comprehensive prior art of record to Utsunomiya of U.S. Pat. No. 6814832) teaches a method of manufacturing a display device, comprising: a first step of sequentially forming a first metal film, a first oxide film, and an optical filter on a first substrate, attaching a second substrate to a surface of the optical



filter with a first adhesive material such that the second substrate faces the first substrate through the optical filter, attaching a first support medium to a surface of the second substrate with a first peelable adhesive agent, and separating the first metal film from the first oxide film by a physical means so as to form an optical film; a second step of sequentially laminating a second metal film and a second oxide film on a third substrate, forming a layer including a pixel over the second oxide film; and a third step of separating the second metal film from the second oxide film by a physical means after the first and second steps, attaching the first oxide film to the second oxide film with a third adhesive material, and removing the first peelable adhesive agent and the first support medium.

However, the prior art of record neither anticipates nor renders obvious to one ordinary skilled in the art the method of manufacturing a display device comprising the various elements as claimed above in combination with the specific limitation of attaching a fourth substrate to a surface of the layer including the pixel with a second adhesive material as set forth in Claim 10.

E. Claim(s) 11-16, 19-32 are allowed over the prior art of record.

The following is an examiner's statement of reasons for allowance:

The prior art of record (most comprehensive prior art of record to Utsunomiya of U.S. Pat. No. 6814832) teaches a method of manufacturing a display device, comprising: a first step of sequentially forming a first metal film, a first oxide film, and an optical filter on a first substrate, attaching a first support medium to a surface of the optical filter with a first peelable adhesive agent such that the first support medium faces

the first substrate through the optical filter, separating the first metal film from the first oxide film by a physical means, and attaching a second substrate to a surface of the first oxide film with a first adhesive material and removing the first peelable adhesive agent and the first support medium so as to form an optical film; a second step of sequentially laminating a second metal film and a second oxide film on a third substrate, forming a layer including a pixel over the second oxide film; and a third step of separating the second metal film from the second oxide film by a physical means after the first and second steps, attaching the optical filter to the second oxide film with a third adhesive material.

However, the prior art of record neither anticipates nor renders obvious to one ordinary skilled in the art the method of manufacturing a display device comprising the various elements as claimed above in combination with the specific limitation of attaching a fourth substrate to a surface of the layer including the pixel with a second adhesive material as set forth in Claim 11.

Claim(s) 12-16, 19-32 are allowed because of their dependency status from Claim 11.

***Other Prior Art Cited***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

U.S. Pub. No. 2005/0095945.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hana A. Sanei whose telephone number is (571)-272-8654. The examiner can normally be reached on Monday- Friday, 9 am - 5 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minh-Toan Ton can be reached on (571) 272-2303. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*/ Hana A. Sanei /  
Examiner*

**/Toan Ton/  
Supervisory Patent Examiner  
Art Unit 2889**